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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,063	09/05/2003	Hassan Mostafavi		8329

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EXAMINER	
SONG, HOON K	
ART UNIT	**PAPER NUMBER**
2882	

DATE MAILED: 03/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/656,063	MOSTAFAVI, HASSAN	
	Examiner	Art Unit	
	Hoon Song	2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 December 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-53* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-34,48-50 and 54-65* is/are allowed.

6)☒ Claim(s) *35-47 and 51-53* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 October 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/30/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 18, 25 and 28 are objected to because of the following informalities:

In claim 18 at line 2 and 3, "one or more" should read --two or more-- (note: a composite image can not be generated using only one image). Claims 25 and 28 have same informalities.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 35-37, 39-40, 42-45, 47 and 51-53 are rejected under 35 U.S.C. 102(e) as being anticipated by Eck et al. (US 7003146B2).

Regarding claims 35, 40 and 43, Eck teaches a method or apparatus comprising:

obtaining a first x-ray image (30) by an obtaining means;

obtaining a second x-ray image (30) by the obtaining means, wherein the first and the second x-ray images are obtained using x-ray radiation having same energy level, and at least a portion of the first x-ray image and at least a portion of the second x-ray image comprise images of a same portion of an object; and

determining a composite image (averaged image) based on at least a portion of the first and second x-ray images by a determining means.

Regarding claims 36 and 44, Eck teaches the first and second x-ray images are generated in a sequence (figure 1 and 2).

Regarding claims 37 and 45, Eck teaches the first and second x-ray images each contains an image of at least a portion of an animal body (figure 1 and 2).

Regarding claims 39, 42 and 47, Eck teaches determining a value associated with a contrast of the composite image.

Regarding claims 51-53, Eck teaches the first and the second x-ray images are generated using an imaging device that remains stationary between a first time at which the first x-ray image is generated and a second time at which the second x-ray image is generated (figure 1).

Claims 35, 38, 40-41, 43 and 46 are rejected under 35 U.S.C. 102(e) as being anticipated by Maschke (US 6940945B2)

Regarding claims 35, 40 and 43, Maschke teaches a method or apparatus comprising:

obtaining a first x-ray image (first image) by an obtaining means;

obtaining a second x-ray image (second image) by the obtaining means, wherein the first and the second x-ray images are obtained using x-ray radiation having same energy level, and at least a portion of the first x-ray image and at least a portion of the second x-ray image comprise images of a same portion of an object (abstract); and

determining a composite image (superimposed image) based on at least a portion of the first and second x-ray images by a determining means.

Regarding claims 38, 41 and 46, Maschke teaches the determining a composite image comprises subtracting at least a portion of the first x-ray image from at least a portion of the second x-ray image (figure 2-5).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 35, 38-43 and 46-47 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-63 of copending Application No. 10/655920. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims are anticipated by the claims of the patent as follows:

Regarding claims 35, 40 and 43, the application claims a method or apparatus comprising:

obtaining a first x-ray image by an obtaining means;

obtaining a second x-ray image by the obtaining means, wherein the first and the second x-ray images are obtained using x-ray radiation having same energy level, and at least a portion of the first x-ray image and at least a portion of the second x-ray image comprise images of a same portion of an object; and

determining a composite image based on at least a portion of the first and second x-ray images by a determining means (claim 1).

Regarding claims 38, 41 and 46 the application claims the determining a composite image comprises subtracting at least a portion of the first x-ray image from at least a portion of the second x-ray image (claim 2).

Regarding claims 39, 42 and 47, the application claims determining a value associated with a contrast of the composite image (claim 11).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Allowable Subject Matter

Claims 1-34, 48-50 and 54-65 allowed.

Regarding claims 1-34, 48-50 and 54-65, the prior art fails to teach a system or method comprising: collecting a first x-ray image and a second x-ray image; determining a composite image based on the first and second x-ray images; collecting a third x-ray image, wherein at least a portion of the first x-ray image and at least a portion of the

third x-ray image comprises images of a same portion of an object; and enhancing a feature in the third x-ray image by adjusting the third x-ray image based on the composite image, wherein the third x-ray image is collected without performing a weighted subtraction of the first x-ray image as claimed in independent claims 1, 8, 11, 18, 25 and 28.

Response to Arguments

Applicant's arguments with respect to claims 35-47 and 51-53 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoon Song whose telephone number is (571) 272-2494. The examiner can normally be reached on 8:30 AM - 5 PM, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Glick can be reached on (571) 272 - 2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DAVID V. BRUCE
PRIMARY EXAMINER

HKS

3/18/06
HKS